



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

September 6, 2019

Nakia Smith
Regulatory Product Manager, Fungicides
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, NC 27419

Subject: PRIA Label Amendment – New Use of Propiconazole on Avocado, conversion to *Brassica*, leafy greens, subgroup 4-16B, except watercress, Leaf petiole vegetable subgroup 22B, Celtuce, Florence fennel, Swiss chard, and the expansion to Vegetable, root, except sugar beet, subgroup 1B.
Product Name: Tilt
EPA Registration Number: 100-617
Application Date: December 18, 2017
Decision Number: 537920, 537923

Dear Ms. Smith:

The application referred to above, submitted under the Federal Insecticide, Fungicide and Rodenticide Act, as amended is acceptable under FIFRA sec 3 (c)(5). You must submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Aswathy Balan by phone at 703-347-0510, or via email at balan.aswathy@epa.gov.



for Rachel C. Holloman, Chief

Shaja B. Joyner, Product Manager 20
Fungicide-Herbicide Branch
Registration Division 7505P

ACCEPTED

09/06/2019

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 100-617

[MASTER]

PROPICONAZOLE | **GROUP 3** | **FUNGICIDE**

Tilt®

Fungicide

Broad spectrum fungicide for control of plant diseases

Active Ingredient:

Propiconazole*: 41.8%

*Other Ingredients**:* 58.2%

Total: 100.0%

*CAS No. 60207-90-1

**Contains petroleum distillates

Tilt is formulated as an emulsifiable concentrate (EC) and contains 3.6 lb of propiconazole per gallon.

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use inside booklet.

See First Aid statement inside booklet or on container label.

EPA Reg. No. 100-617

EPA Est.

_____ gallons

Net Contents

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
NOTE TO PHYSICIAN	
Contains petroleum distillates - vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER	
For 24-Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire or Accident) Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

Causes substantial but temporary eye injury. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed, absorbed through skin, or inhaled. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Goggles or face shield as protective eyewear
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils or Viton® ≥ 14 mils
- Shoes plus socks

All handlers using propiconazole as a seed piece treatment must wear:

- Goggles or face shield as protective eyewear
- Chemical-resistant gloves
- Chemical-resistant apron

User Safety Requirements

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

User Safety Recommendations

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

Propiconazole is toxic to fish and shrimp. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Protective eyewear
- Coveralls
- Chemical-resistant gloves, such as barrier laminate or Viton
- Shoes plus socks

PRODUCT INFORMATION

Tilt is a broad spectrum fungicide registered for the control of many important plant diseases.

USE RESTRICTIONS

- Do not use Tilt in greenhouses.
- Do not use Tilt as a tree injection except on avocado trees in California, Florida and Puerto Rico.
- Do not apply in a manner that will result in exposure to humans or animals.

Integrated Pest Management

Tilt should be integrated into an overall disease and pest management strategy (IPM) whenever the use of a fungicide is required. Cultural practices known to reduce disease development should be followed. Consult your local agricultural authorities for additional IPM strategies established for your area. Tilt may be used in State Agricultural Extension advisory (disease forecasting) programs which recommend application timing based on environmental factors favorable for disease development.

RESISTANCE MANAGEMENT

PROPICONAZOLE	GROUP	3	FUNGICIDE
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For resistance management, Tilt contains a Group 3 fungicide. Any fungal population may contain individuals naturally resistant to Tilt and other Group 3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies must be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of Tilt or other Group 3 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.

- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Syngenta Crop Protection at 1-866-796-4368. You can also contact your university extension specialist to report resistance.

Rotational Crops:

Rotational Crops	Planting Time From Last Tilt Application
Avocado Beans, Dry and Succulent Brassica, Leafy greens (Subgroup 4-16B, except watercress) Bulb Vegetables Carrots Leaf Petiole Vegetable, Subgroup 22B Cereals (wheat, barley, rye, triticale, oats) Cilantro (Coriander) Leaves Corn (field, seed, pop, and sweet) Dill Garden Beets Grasses grown for seed (Cool season grasses only) Mint Parsley, Fresh and Dried leaves Peanuts Quinoa Radish Rapeseed (Canola), Subgroup 20A Rice (including Wild Rice) Root Vegetables (Subgroup 1B, except Sugar Beet) Sorghum Soybeans Strawberry and other Low-Growing Berry Subgroup 13-07G Sugar Beets Sugarcane Watercress	0 days
Buckwheat Millet	12 Months
Alfalfa (if propiconazole rate does not exceed 0.22 lb ai/acre/year)	75 days
All Other Crops Intended for Food, Grazing, or Feed	105 days

Any crop listed and approved for use on this label has a 0 day plant back interval.

SPRAY DRIFT MANAGEMENT

To avoid spray drift, **DO NOT** apply when conditions favor drift beyond the target area. Avoid spray overlap, as crop injury may occur.

MANDATORY SPRAY DRIFT

Aerial Applications

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Groundboom Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium to ultra coarse spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Groundboom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

- BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

- RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

- SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

- WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator needs to be familiar with local wind patterns and how they affect spray drift.

- TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

- TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

OTHER STATE AND LOCAL REQUIREMENTS

Applicators must follow all state and local pesticide drift requirements regarding application of propiconazole. Where states have more stringent regulations, they must be observed.

Spray Equipment

All application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Thorough coverage is necessary to provide good disease control.

Air assisted or air blast sprayers move spray droplets into the canopy using a forced air stream. Set up the fan to deliver only enough air volume to penetrate the canopy and provide good coverage. Adjust deflectors or other aiming devices to direct spray only to the target area.

Equip sprayers with nozzles that provide accurate and uniform application. Be certain that nozzles are the same size and uniformly spaced across the boom. Calibrate sprayer before use.

Use a pump with capacity to: (1) maintain 35-40 psi at nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension - this requires recirculation of 10% of tank volume per minute. Use a jet agitator or liquid sparge tube for agitation. **DO NOT** air sparge.

Although Tilt is an emulsifiable concentrate, it is suggested that screens be used to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of pump should be *16-mesh or coarser*. **DO NOT** place a screen in the recirculation

line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's specifications.

For more information on spray equipment and calibration, consult sprayer manufacturer's and state recommendations. For specific local directions and spray schedules, consult the current state agricultural recommendations.

MIXING INSTRUCTIONS

Prepare no more spray mixture than is required for the immediate operation. Thoroughly clean spray equipment before using this product. Agitate the spray solution before and during application. Rinse spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

Tilt Alone: Add $\frac{1}{2}$ - $\frac{2}{3}$ of the required amount of water to the spray or mixing tank. With the agitator running, add the Tilt to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the Tilt has completely dispersed into the mix water. Maintain agitation until all of the mixture has been sprayed.

Tilt + Tank Mixtures: Tilt is usually compatible with all tank mix partners listed on this label. To determine the physical compatibility of Tilt with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to 1 qt of water. Add wettable powders and water dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Add $\frac{1}{2}$ - $\frac{2}{3}$ of the required amount of water to the spray or mixing tank. With the agitator running, add the tank mix partner into the tank. Allow the material to completely dissolve and disperse into the mix water. Continue agitation while adding the remainder of the water and the Tilt to the spray tank. Allow the Tilt to completely disperse. Spray the mixture with the agitator running.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product may not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are registered.

RESTRICTION: Do not mix Tilt with dodine-containing products (Syllit®, EPA Reg. No. 55260-6) or crop injury may occur.

APPLICATION INSTRUCTIONS

Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.

Ground Application: For tree crops, apply in a minimum of 50 gallons of water per acre unless specified otherwise. For other crops, apply in a minimum of 10 gallons of water per acre unless specified otherwise.

Aerial Application: For tree crops, apply in a minimum of 10 gallons of water per acre unless specified otherwise. For other crops, apply in a minimum of 2 gallons of water per acre unless specified otherwise.

Application Through Irrigation Systems (Chemigation) - Apply Tilt through irrigation equipment only to crops for which chemigation is specified on this label.

For chemigation, apply in 0.1- 0.25 inches of water. Chemigation with excessive water may lead to a decrease in efficacy.

Tilt, alone or in combination with other pesticides which are registered for application through irrigation systems, may be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, or moving wheel irrigation systems. **DO NOT** apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. **DO NOT** connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Notes: DO NOT inject Tilt at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part Tilt. Tilt is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used, but should be replaced once a year. **DO NOT** use Viton, Buna-N, Neoprene, or PVC seals.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. **DO NOT** apply when wind speed favors drift beyond the area intended.

Center Pivot Irrigation Equipment

Notes: (1) Use only with drive systems which provide uniform water distribution. (2) **DO NOT** use end guns when chemigating Tilt through center pivot systems because of non-uniform application.

- Determine the size of the area to be treated.
- Determine the time required to apply $\frac{1}{8}$ - $\frac{1}{2}$ inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as specified by the equipment manufacturer. When applying Tilt through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of Tilt required to treat the area covered by the irrigation system.
- Add the required amount of Tilt and sufficient water to meet the injection time requirements to the solution tank.
- Make sure the system is fully charged with water before starting injection of the Tilt solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Tilt solution has cleared the sprinkler head.

Solid Set, Hand Move, and Moving Wheel Irrigation Equipment

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval. When applying Tilt through irrigation equipment use the lowest obtainable water volume while maintaining uniform distribution.
- Determine the amount of Tilt required to treat the area covered by the irrigation system.
- Add the required amount of Tilt into the same quantity of water used to calibrate the injection period.

- Operate the system at the same pressure and time interval established during the calibration.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Tilt solution has cleared the last sprinkler head.

CROP USE DIRECTIONS

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Almonds	Brown Rot Blossom Blight (<i>Monilinia laxa</i> , <i>M. fructicola</i>)	4-8 (0.11-0.22)	Apply Tilt at 5-10% bloom and 50-100% bloom. Under severe disease conditions, use the highest rate. Minimum retreatment interval is 7 days.
	Anthracnose (<i>Colletotrichum acutatum</i>)	8 (0.22)	Apply Tilt beginning at bud break on a 7-14 day interval.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 15 gal/A).			
Specific Use Restrictions: <ol style="list-style-type: none"> 1) Do not apply more than 32 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.9 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 8 applications per year when applying at the lowest rate (4 fl oz/A). 5) Do not apply within 60 days of harvest (60-day PHI). 6) Do not graze livestock in treated areas or cut treated cover crop for feed. 			

Crop	Target Diseases	Use Rate	Application Instructions
Avocado	Laurel Wilt (<i>Raffaella lauricola</i>)	0.25 fl oz Tilt per inch tree diameter (Equivalent to 3.2 grams of propiconazole per inch of tree diameter).	<p>Tree Measurement: Measure the diameter of 5 to 10 representative trees in a commercial orchard with a tree diameter-tape (D-tape) at 1-2 feet above the ground. This is the diameter at a 1-2 feet trunk height (tree diameter = TD). If only a regular tape is available, measure the tree circumference and divide that number by 3.14. Calculate the average TD of the trees in the orchard. If trees are multi-trunked, take the diameters near where the multi-trunks meet. If branching occurs at ground level then measure the diameter of the trunks (treatment rate would be based on the combined trunk diameters).</p> <p>Retreatment: When trees are first treated with Tilt, note whether Laurel Wilt is present and, if so, the severity of symptoms. It is expected that a single application per year will be sufficient. However, trees can be treated after a minimum re-treatment interval of 90 days and a maximum of 126 fl oz of Tilt/A/year. Retreatment should be considered if laurel wilt develops in trees within one year of treatment. Thereafter, preventative retreatment should be conducted annually, even in the absence of the disease.</p> <p>Treat the avocado trees in commercial orchards when sap is actively moving up in the trees, not during dormant periods (e.g. cold air and soil temperatures during winter or when the trees are leafless). Preventative applications are more effective than therapeutic treatments. Trees that are severely affected by laurel wilt may not respond well to treatment. Make sure that the water used does not contain any other chemicals and the fungicide mixing container is clean.</p> <p><u>Calculate the total fl oz of Tilt per acre:</u> $0.25 \text{ fluid ounce} / 1 \text{ inch TD} \times (\text{average TD of trees}) \times \text{number of trees/acre} = \text{total fluid ounces of Tilt/A.}$</p>
<p>Application: Choose one of the two application methods: tree injection or tree infusion. It is important for Tilt to get into the xylem of the tree to be efficacious. See directions for each method that follows.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Use is limited to California, Florida and Puerto Rico only. 2) Do not apply more than 252 fl oz of Tilt/A/year. 3) Do not apply more than 126 fl oz/A/application of Tilt. 4) Do not apply more than 7.09 lb ai propiconazole-containing product/A/year. 5) Do not apply more than 2 applications per year. 6) The minimum retreatment interval is 90 days. 7) Do not apply within 7 days of harvest (7-day PHI). 			

Avocado Tree Injection or Tree Infusion Application Method:

Use the rates in **Table 1**. Use the injection method to inject the product into the tree trunk or the infusion method to infuse the product into the flare roots or trunk base. Drill holes according to the method below 3-6 inches apart completely around the tree. Use up to the volume specified in **Table 1**. It is advised to have an arborist trained in injection/infusion to treat the trees or provide training.

Correct Location for Injector or Infusion Placement:

The flare root area is the transitional zone between the trunk and the root system. Uptake and distribution of Tilt is more effective when infusions are made into the flare roots. In addition, wounds created in the

flare root area close more rapidly in comparison to wounds above the flare root area. Applications made via injections should be made to the trunk and/or major limbs.

Tree Preparation:

1. Depending on the application type (injection or infusion) prepare the area to be treated. Infusion applications should be made to the flare roots. Injection applications should be made to the trunk.
2. Heavy, thick or loose outer bark may be carefully shaved to form a smoother injection point and to ensure the operator that the drill hole penetrates through the bark to the xylem.
3. For infusions, if the flare roots are not clearly exposed, carefully remove 2 to 4 inches of soil from the base of the tree to uncover the top of the flare roots. Brush away loose soil.
4. Drill holes through the bark, into sapwood using a clean sharp drill bit. Drill hole diameter should be adequate to allow insertion of injection tees and formation of air tight contact between active xylem and the delivery point of the injection tees. Generally, a drill hole diameter of 7/32-5/16 inch is appropriate. Follow manufacturer's instructions for the particular injection device used in the treatment.
Drill hole depth should be adequate to deliver the product into active xylem tissue. Generally, ¾ inch depth is appropriate, but trees with thick bark may require increased drill hole depth to reach the active xylem layer. Space injectors 3-6 inches apart around the base of the tree. There should be several injection/infusion points around each tree. New infusion sites should be used for each application. Do not drill in the valleys between the flare roots or into cankered areas. Drill above these areas into the trunk, then continue again into sound sapwood on the flares.
5. Disinfect the drill bit between trees with household bleach (20% solution), ethanol, or other disinfectant. Rinse bit with clean water after disinfecting.
6. Insert into the drilled holes the injection ports ("tees"). For infusions, connect plastic tubing to "tees". The tubing should have inlet and outlet valves.
7. Mix the specified amount of Tilt and water thoroughly in the tank before beginning the infusion treatment. For the injection treatment, use a syringe to inject the specified amount of Tilt and water into the injection port.

Table 1. Amount of Tilt to use according to tree size
Dilute 0.25 fl oz of Tilt in up to 1 liter of water per inch TD

TD inches	Amount Tilt		Water Volume for injection	
	ml	fl oz	liters	gallons
1	7	0.25	1	0.25
3	20	0.75	3	0.8
5	35	1.25	5	1.3
10	70	2.5	10	2.6
15	100	3.75	15	4.0
20	145	5	20	5.25

Infusion:

For pressurized infusions, with the outlet valve open, connect the tank to the inlet valve and begin pumping solution until all air bubbles come out of the outlet valve. Direct the solution into a container and return the solution to the tank. Shut off the outlet valve. Pressurize tank to 20-30 psi. Check for leaks and gently tap in tees if necessary. Maintain continuous pressure on the injection system until the full amount of solution is in the tree.

Passive infusions, using gravity flow are also acceptable.

Injection:

For injections, use a veterinary syringe to inject the specified amount of Tilt and water into each injection port in the trunk of the tree and/or major limbs.

After infusion or injection is complete, remove tees and leave drill holes unplugged. A water flush to cleanse the hole will assist with wound closure. For infusion applications, soil should be replaced around

the tree. It is not necessary to treat the drill holes with wound paint or other sealing compounds. New injection sites should be used for each application.

Contact your local extension agent for more details on tree injection and infusion. The injection and infusion systems described is mean as an example; please refer to manufacturer's instructions when using other types of tree injection and infusion systems.

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Banana and Plantains	Black Sigatoka (<i>Mycosphaerella fijiensis</i>)	3 (0.08)	Apply Tilt before disease symptoms appear at the onset of the rainy season. Apply 3 fl oz of Tilt/A in 10-20 gallons of water/A. Apply no more than 2 consecutive applications on a 21-25 day schedule before rotating to another labeled product with a different mode of action for at least 2 sprays. A maximum of 8 applications can be made. If possible, it is advised to have at least 2 consecutive months 'triazole free' during the period of lower disease pressure.
	<p>Mixing Procedures</p> <p>Oil-in-Water Emulsion</p> <ol style="list-style-type: none"> 1. Add the crop oil to the spray tank. 2. Add the emulsifier (0.6 fl oz/gal of oil) and Tilt to the spray tank and mix thoroughly for 5 minutes. 3. Add water to the spray tank and mix thoroughly for 15 minutes. <p>Oil Alone</p> <ol style="list-style-type: none"> 1. Add crop oil to the spray tank. 2. Add the Tilt to the spray tank and mix thoroughly for 5 minutes. <p>Maintain agitation.</p>		
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 24 fl oz of Tilt per year (this includes any pre-harvest sprays). 2) Do not apply more than 3 fl oz/A/application of Tilt. 3) Do not apply more than 0.67 lb ai propiconazole-containing product/A/year. 4) Do not exceed 8 applications per year. 5) Do not apply Tilt within 100 yards of non-bagged bananas. 6) Do not apply Tilt on bananas unless they are protected by polyethylene bags. 7) Do not apply Tilt on plantains if the fruit present are not protected with polyethylene bags. 8) Do not feed whole bananas and plantains to animals. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
<p>Beans, Dry and Succulent</p> <p>Bean (<i>Cicer arietinum</i>) (<i>Lupinus</i> spp.) (<i>Phaseolus</i> spp.) (<i>Vigna</i> spp.) (<i>Vicia faba</i>)</p> <p>See below for complete list of dry and succulent beans.</p>	<p>Bean rust (<i>Uromyces appendiculatus</i>)</p> <p>Anthracnose (<i>Colletotrichum lindemuthianum</i>)</p> <p>Alternaria leaf spot (<i>Alternaria alternata</i>)</p> <p>Ascochyta leaf spot (<i>Ascochyta phaseolorum</i>)</p> <p>Rust (<i>Phakopsora</i> spp.)</p> <p>Southern blight (<i>Sclerotium rolfsii</i>)</p> <p>Web blight (<i>Rhizoctonia solani</i>)</p> <p>Ascochyta blight (<i>Mycosphaerella pinodes</i>)</p> <p>Ascochyta leaf and pod spot (<i>Ascochyta</i> spp.)</p> <p>Alternaria blight (<i>Alternaria</i> spp.)</p>	<p>4 (0.11)</p>	<p>Apply when conditions are conducive for disease. Up to three applications may be made on a 7-14 day interval.</p> <p>NOTE: On certain bean varieties, Tilt application may cause crinkled and/or greener leaves. Yields of beans displaying these characteristics have not been reduced.</p>
<p>Dry and Succulent Beans: <i>Cicer arietinum</i> (chickpea, garbanzo bean); <i>Lupinus</i> spp. (including sweet lupine, white sweet lupine, white lupine, and grain lupine), <i>Phaseolus</i> spp. (including kidney bean, lima bean, mung bean, navy bean, pinto bean, snap bean, and wax bean); <i>Vicia faba</i> (broad bean, fava bean); <i>Vigna</i> spp. (including asparagus bean, blackeyed pea and cowpea)</p>			
<p>Note: Tilt may be applied by ground or by air.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 12 fl oz of Tilt /A/year. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai of propiconazole-containing products. 4) Do not exceed 3 applications per year. 5) Do not apply within 7 days of harvest for succulent beans (7-day PHI). 6) Not for use on cowpea cultivars intended for livestock feeding only. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Berry, Caneberry Subgroup 13-07A	Mummyberry Disease (<i>Monilinia vaccinicorymbosi</i>)	6 (0.17)	Make first application of Tilt beginning at green tip and repeat in 7-10 days. If conditions are favorable for disease development, additional applications may need to be made at pink bud and repeating every 7-10 days through petal fall.
Blackberry Loganberry Red and Black Raspberry Wild Raspberry	Leaf Spot and Stem Canker (<i>Septoria albopunctata</i>) Rust (<i>Pucciniastrum vaccinii</i>)	6	Apply when conditions favor disease development. Repeat applications on a 4-week spray interval.
Cultivars, varieties, and/or hybrids of these.	Leaf and Cane Spot (<i>Septoria rubi</i>)	6	Apply as a delayed dormant spray after training in the spring. Repeat this application in the late spring, again at bud break, and again once flowering has begun.
See additional crops below.	Powdery Mildew (<i>Microsphaera vaccinii</i>)	6	Apply Tilt at 5-10% bloom. Repeat this application at full bloom and on a 14 day interval while conditions are favorable for disease development.
Berry, Bushberry Subgroup 13-07B	Leaf Spot (<i>Septoria</i> spp.)	6	Make first application any time prior to bloom and again after petal fall. If needed, repeat application just after harvest.
Highbush Blueberry Lowbush Blueberry Highbush Cranberry Black Currant Red Currant Elderberry Gooseberry Lingonberry Native Currant			
Cultivars, varieties, and/or hybrids of these. See additional crops below.			
Low Growing Berries (See Strawberry section)			
Additional Caneberries: Bingleberry, Boysenberry, Dewberry, Lowberry, Marionberry, Olallieberry, Youngberry Additional Bushberries: Aronia Berry, Buffalo Currant, Chilean Guava, European Barberry, Edible Honeysuckle, Huckleberry, Jostaberry, Juneberry (Saskatoon Berry), Salal, Sea Buckthorn			
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground (a minimum of 15 gal/A) or aerial application (a minimum of 5 gal/A).			

Specific Use Restrictions:

- 1) Do not apply more than 30 fl oz/A/year of Tilt.
- 2) Do not apply more than 6 fl oz/A/application of Tilt.
- 3) Do not apply more than 0.84 lb ai propiconazole-containing product/A/year.
- 4) Do not exceed 5 applications per year.
- 5) Do not apply within 30 days of harvest (30-day PHI).

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
<p>Brassica, leafy greens, subgroup 4-16B, except watercress</p> <p>Cabbage, Chinese (bok choy) Collards Kale Mustard greens</p> <p>And cultivars, varieties, and hybrids of these commodities</p> <p>See separate Directions for Watercress</p> <p>(See additional crops below)</p>	<p>Leaf Spot (<i>Cercospora</i> spp.) Powdery Mildew (<i>Erysiphe polygoni</i>)</p>	<p>3-4 (0.08-0.11)</p>	<p>Begin applications at first sign of disease. Repeat on a 7-10-day interval.</p> <p>If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.</p>
<p>Brassica, leafy greens, subgroup 4-16B, except watercress: Arugula; broccoli raab; broccoli, Chinese; cabbage, abyssinian; cabbage, seakale; Chinese cabbage, bok choy; collards; cress, garden; cress, upland; hanover salad; kale; maca, leaves; mizuna; mustard greens; radish, leaves; rape greens; rocket, wild; shepherd's purse; turnip greens, and cultivars, varieties, and hybrids of these commodities</p>			
<p>Application: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 12 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing product/A/year. 4) Do not exceed 3 applications per year when applying at the highest rate (4 fl oz/A) or 4 applications per year when applying at the lowest rate (3 fl oz/A). 5) Do not apply within 7 days of harvest (7-day PHI) 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
<p>Bulb Vegetables</p> <p>Bulb Onions Subgroup 3-07A</p> <p>Garlic Bulb Onions Bulb Shallot Bulb</p> <p>Cultivars, varieties, and/or hybrids of these. See additional crops below.</p> <p>Green Onions Subgroup 3-07B</p> <p>Leek Fresh Onion Green Onion Fresh Shallot Leaves</p> <p>Cultivars, varieties, and/or hybrids of these. See additional crops below.</p>	<p>Purple Blotch (<i>Alternaria porri</i>)</p> <p>Suppression of Botrytis Leaf Blight (<i>Botrytis squamosa</i>)</p>	<p>Tilt solo 4-8 (0.11-0.22)</p> <p>Tilt plus tank mix partner 2-4 (0.06-0.11)</p>	<p>Begin applications when conditions favor disease development and continue on a 7-10 day interval. Use the higher rate and shorter interval when disease conditions are severe.</p> <p>Apply 2-4 fl oz of Tilt in combination with another fungicide registered for control of botrytis leaf blight or purple blotch. Begin applications when conditions favor disease development and continue on 7-day interval or according to the tank mix partner label. Use the higher rate when disease conditions are severe. To achieve optimum disease control, use a wetting agent or spreader-sticker.</p>
<p>Additional Bulb Onions: Daylily, Fritillaria, Great-headed Garlic, Serpent Garlic, Lily, Chinese Onion, Pearl Onion, Potato Onion</p>			
<p>Additional Green Onions: Fresh Chive Leaves, Fresh Chinese Chive Leaves, Hosta Elegans, Fritillaria Leaves, Kurrat, Lady's Leek, Wild Leek, Beltsville Bunching Onion, Macrostem Onion, Tree Tops Onion, Welsh Onion Tops</p>			
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground (a minimum of 15 gal/A) or aerial application (a minimum of 5 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 2 applications per year when applying at the highest rate (8 fl oz/A) or 8 applications per year when applying at the lowest rate (2 fl oz/A). When applying 4 fl oz/A, do not exceed 4 applications per year. 5) Do not apply within 14 days of harvest on bulb onion types (14-day PHI). 6) Tilt may be applied the day of harvest (0-day PHI) for green onion types. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Leaf Petiole Vegetable Subgroup 22B Cardoon Celery Celery, Chinese Fuki Rhubarb Udo Zuki And Cultivars, varieties, and hybrids of these commodities	Early Blight (<i>Cercospora apii</i>) Late Blight (<i>Septoria apicola</i>)	4 (0.11)	Apply Tilt on a 7 day schedule, either by ground or aerial application. If desired, Tilt may be mixed with appropriate spreader-sticker.
Celtuce Florence fennel Swiss chard	Early Blight (<i>Cercospora apii</i>) Late Blight (<i>Septoria apicola</i>)	4 (0.11)	Apply Tilt on a 7 day schedule, either by ground or aerial application. If desired, Tilt may be mixed with appropriate spreader-sticker.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground (a minimum of 10 gal/A) or aerial application (a minimum of 5 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year. 5) Do not apply within 14 days of harvest (14-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Cereals Wheat See next section for other cereals.	Early Season Suppression of: Powdery Mildew (<i>Blumeria</i> spp., <i>Erysiphe</i> spp.) Leaf Blight (<i>Septoria tritici</i>) Glume Blotch (<i>Stagonospora nordorum</i>) Tan Spot (<i>Pyrenophora tritici-repentis</i>)	2-4 (0.06-0.11)	Apply Tilt in the spring. Follow up with a second application up to Feekes growth stage 10.5.4 for season long control. Applications may be made no closer than a 14-day interval.
	Control of Leaf Diseases: Rust (<i>Puccinia</i> spp.) Powdery Mildew (<i>Blumeria</i> spp., <i>Erysiphe</i> spp.) Leaf Blight (<i>Septoria tritici</i>) Glume Blotch (<i>Stagonospora nordorum</i>) Tan Spot (<i>Pyrenophora tritici-repentis</i>) Helminthosporium Leaf Blight (<i>Drechslera tritici-repentis</i>) Spot Blotch (<i>Bipolaris sorokiniana</i>) Net Blotch (<i>Pyrenophora teres</i>)	4 (0.11)	Protecting the flag leaf is important for maximizing the potential yield. Highest yields are normally obtained when Tilt is applied when the flag leaf is 50% to fully emerged. Applications may be made no closer than a 14-day interval. The use of oil-base adjuvant may improve the spray coverage and canopy penetration. Tilt can be applied through full head emergence (Feekes growth stage 10.5.4). Do not apply after this stage to avoid possible illegal residues.
	Foot Rot (<i>Pseudocercospora</i> spp.)	4	Apply Tilt plus half rates of other EPA registered fungicides such as Topsin® M. Apply at tillering, but before elongation has occurred.
	Fusarium Head Blight Suppression	4	Apply Tilt at approximately 50% flowering. Addition of a penetrating type of adjuvant may increase Fusarium head blight suppression.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.			
Specific Use Restrictions: 1) Do not apply more than 8 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/year of Tilt if forage or hay will be harvested. 3) Do not apply more than 4 fl oz/A/application of Tilt. 4) Do not apply more than 0.22 lb ai propiconazole-containing products/A/year. 5) Do not exceed 2 applications per year when applying at the highest rate (4 fl oz/A) or 4 applications per year when applying at the lowest rate (2 fl oz/A). 6) Do not apply within 7 days of harvest for forage or hay (7-day PHI). 7) Do not apply after Feekes 10.5.4.			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Cereals Barley Rye Triticale Oats	Early Season Suppression of: Powdery Mildew <i>(Blumeria spp., Erysiphe spp.)</i> Leaf Blight <i>(Septoria tritici)</i> Glume Blotch <i>(Stagonospora nordorum)</i> Tan Spot <i>(Pyrenophora tritici-repentis)</i>	2-4 (0.06-0.11)	Apply Tilt in the spring. Follow up with a second application up to Feekes growth stage 10.5.4 for season long control. Applications may be made no closer than a 14-day interval.
	Control of Leaf Diseases: Rust <i>(Puccinia spp.)</i> Powdery Mildew <i>(Blumeria spp., Erysiphe spp.)</i> Leaf Blight <i>(Septoria tritici)</i> Glume Blotch <i>(Stagonospora nordorum)</i> Tan Spot <i>(Pyrenophora tritici-repentis)</i> Helminthosporium Leaf Blight <i>(Drechslera tritici-repentis)</i> Spot Blotch <i>(Bipolaris sorokiniana)</i> Barley Scald <i>(Rhynchosporium secalis)</i> Barley Stripe <i>(Pyrenophora graminea)</i> Net Blotch <i>(Pyrenophora teres)</i>	4 (0.11)	Protecting the flag leaf is important for maximizing the potential yield. Highest yields are normally obtained when Tilt is applied when the flag leaf is 50% to fully emerged. Applications may be made no closer than a 14-day interval. The use of oil-base adjuvant may improve the spray coverage and canopy penetration.
	Foot Rot <i>(Pseudocercospora spp.)</i>	4	Apply Tilt plus half rates of other EPA registered fungicides such as Topsin® M. Apply at tillering, but before elongation has occurred.
	Fusarium Head Blight Suppression	4	Apply Tilt at approximately 50% flowering. Addition of a penetrating type of adjuvant may increase Fusarium head blight suppression.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.			
Specific Use Restrictions: 1) Do not apply more than 8 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/year of Tilt if forage or hay will be harvested. 3) Do not apply more than 4 fl oz/A/application of Tilt. 4) Do not apply more than 0.22 lb ai propiconazole-containing products/A/year. 5) Do not exceed 2 applications per year when applying at the highest rate (4 fl oz/A) or 4 applications per year when applying at the lowest rate (2 fl oz/A). 6) Do not apply within 7 days of harvest for forage or hay (7-day PHI). 7) Do not apply after Feekes 10.5.4.			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Citrus (non-bearing) Calamondin Citron Citrus hybrids Grapefruit Kumquat Lemon Lime Mandarin Orange (sour and sweet) Pummelo Satsuma Mandarin Tangerine Including all cultivars and/or hybrids of these.	Greasy Spot <i>(Mycosphaerella citri)</i>	6-8 (0.17-0.22)	Begin applications in June. Apply on 30 day interval through August.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 15 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 24 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.67 lb ai propiconazole-containing product/A/year. 4) Do not exceed 3 applications per year when applying at the highest rate (8 fl oz/A) or 4 applications per year when applying at the lowest rate (6 fl oz/A). 5) Do not apply to citrus that will bear harvestable fruit within 12 months. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Corn Field Seed Popcorn Sweet Corn	Northern Corn Leaf Blight <i>(Setosphaeria turcica)</i> Northern Corn Leaf Spot <i>(Cochliobolus carbonum)</i> Southern Corn Leaf Blight <i>(Cochliobolus heterostrophus)</i> Also known as Helminthosporium Leaf Blights <i>(H. maydis, H. turcicum, H. carbonum)</i>	2-4 (0.06-0.11)	For leaf blights apply Tilt when disease first appears. Continue on a 7-14 day schedule. Use the low rate when disease pressure is low. Under heavy disease pressure or if conditions are favorable for disease, apply the high rate.
	Rusts <i>(Puccinia spp.)</i> Gray Leaf Spot <i>(Cercospora zeae-maydis)</i> Eye Spot <i>(Aureobasidium zeae)</i>	4 (0.11)	Apply Tilt when disease first appears. If conditions favorable for disease persist, continue to apply on a 7-14 day schedule. For best disease control, early applications (at initial disease onset) perform better.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.</p>			
<p>Specific Use Restrictions:</p> <p>For Field Corn, Field Corn Grown for Seed, and Popcorn</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/year of Tilt on field corn harvested for forage. 3) Do not apply more than 4 fl oz/A/application of Tilt. 4) Do not apply more than 0.45 lb ai propiconazole-containing products/A/year. 5) Do not exceed 4 applications per year when applying at the highest rate (4 fl oz/A) or 8 applications per year when applying at the lowest rate (2 fl oz/A). 6) Do not apply within 30 days of harvest for forage, grain and stover (30-day PHI). <p>For Sweet Corn:</p> <ol style="list-style-type: none"> 1) Do not apply within 14 days of harvest for ears (14-day PHI). 2) Do not apply within 14 days of harvest for forage (14-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Cranberries	Cottonball (<i>Monilinia oxycocci</i>)	4-6 (0.11-0.17)	Make the first application at leaf bud break and repeat in 14 days. Make the third application at early bloom and repeat in 14 days. Under severe pressure, use the higher rate for control.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 20 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) For use only in Oregon, Washington, and Wisconsin. 2) Do not apply more than 24 fl oz/A/year of Tilt. 3) Do not apply more than 6 fl oz/A/application of Tilt. 4) Do not apply more than 0.67 lb ai propiconazole-containing product/A/year. 5) Do not exceed 4 applications per year when applying at the highest rate (6 fl oz/A) or 6 applications per year when applying at the lowest rate (4 fl oz/A). 6) Do not apply within 45 days of harvest for cranberries (45-day PHI). 7) Do not allow release of irrigation or flood water to non-target aquatic habitat for at least 14 days after the last application. 8) Do not use cranberry fields used for aquaculture of fish and crustaceans. 9) Do not apply when weather conditions favor drift from treated areas to non-target aquatic habitat. Applicators should use care in making applications near non-target aquatic habitats. 10) Do not apply to flooded crop. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Dill	Cercospora Leaf Blight (<i>Cercosporidium punctum</i>) Powdery Mildew (<i>Erysiphe heraclei</i>)	3-4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 7-10 day interval. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 12 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing product/A/year. 4) Do not exceed 3 applications per year when applying at the highest rate (4 fl oz/A) or 4 applications per year when applying at the lowest rate (3 fl oz/A). 5) Do not apply within 7 days of harvest (7-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Filberts (Hazelnuts)	Eastern Filbert Blight (<i>Anisogramma anomala</i>)	5-8 (0.14-0.22)	Begin applications when green leaf tissue becomes visible and continue on 14-21 day interval. Under severe disease conditions, use the higher rate and shorter interval. NOTE: On certain varieties, Tilt applications may cause smaller and/or greener leaves. Yields of filberts displaying these characteristics have not been reduced due to Tilt treatments.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 15 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 32 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.9 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 6 applications per year when applying at the lowest rate (5 fl oz/A). 5) Do not apply within 60 days of harvest (60-day PHI). 6) Do not graze livestock in treated areas or cut treated cover crop for feed. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Grasses grown for seed (Cool season grasses only)	Rusts (<i>Puccinia</i> spp.) Powdery Mildew (<i>Erysiphe graminis</i>)Ergot Stem Diseases	4-8 (0.11-0.22)	Apply Tilt when powdery mildew infections, and/or rust pustules are noticeable and increasing in number in late spring or early summer. Apply on a 14-21 day interval. To maximize control of severe rust pressure, apply 8 fl oz/A and make applications at 14-day intervals until the seed is mature. Make the last application at least 20 days before seed matures. For bluegrass, it is important to begin application early in the growing season.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air (a minimum of 10 gal/A), or chemigation.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) For use only in Idaho, Minnesota, Nebraska, Oregon, and Washington. 2) Do not apply more than 32 fl oz/A/year of Tilt. 3) Do not apply more than 8 fl oz/A/application of Tilt. 4) Do not apply more than 0.90 lb ai propiconazole-containing products/A/year. 5) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 8 applications per year when applying at the lowest rate (4 fl oz/A). 6) Do not apply within 20 days of harvest (20-PHI) of seed. 7) Do not feed hay cut within 20 days of the last application. 8) Do not graze treated areas within 140 days of the last application. 9) Do not apply to bermudagrass grown for seed. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Mint Peppermint Spearmint	Rust (<i>Puccinia menthae</i>)	4 (0.11)	Begin applications when the plants are 2-4 inches high or when conditions become favorable for disease development. Continue on a 14-day interval as conditions warrant.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground in a minimum of 20 gal/A or by aerial in a minimum of 2 gal/A.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not exceed 12 fl oz of product/A/year. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing product/A/year. 4) Do not exceed 3 applications per year. 5) Do not apply within 7 days of harvest (7-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Parsley, Fresh and Dried Leaves Cilantro (Coriander), Leaves	Leaf Spot (<i>Cercospora</i> spp.) Leaf Spot (<i>Alternaria</i> spp.) Powdery Mildew (<i>Erysiphe</i> spp.)	3-4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 14-day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.			
Specific Use Restrictions: <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (4 fl oz/A) or 5 applications per year when applying at the lowest rate (3 fl oz/A). 5) Do not apply within 14 days of harvest (14-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Peanuts	Early Leaf Spot (<i>Cercospora arachidicola</i>)	2.5-4 (0.07-0.11)	Apply Tilt beginning 35-40 days after planting or at the first appearance of disease. Continue applications on a 10-14 day schedule. Under heavy disease pressure use higher specified application rates. Tilt also may be used in State Agricultural Extension advisory (disease forecasting) programs which specify application timing based on environmental factors favorable for disease development. Tilt may be applied by ground, air or chemigation.
	Late Leaf Spot (<i>Cercosporidium personatum</i>) Rust (<i>Puccinia arachidis</i>) Web Blotch (<i>Phoma arachidicola</i>)	4 (0.11)	
	Southern Stem Rot (<i>Sclerotium rolfsii</i>)	4-8 (0.11-0.22)	Apply Tilt using one of following schedules: A. Apply 4 fl oz/A of Tilt to the crown and pegging zones of the plant using chemigation or directed ground application. Begin applications 45 days after planting, or at the first appearance of disease. Repeat on a 14 day interval. B. Apply 8 fl oz/A of Tilt to the crown and pegging zones of the plant using chemigation or directed ground application. Make 2 applications: the first at pegging (approximately 60 days after planting) or at the first appearance of disease, and the second application 3-4 weeks later. Irrigation: When applying Tilt in irrigation water for Southern Stem Rot control, use a minimum of 0.25 – 0.5 inches of irrigation water/A. Use enough water so that the fungicide penetrates the peanut canopy and reaches the crown of the plant where Southern Stem Rot is most active. When applying Tilt via irrigation or as a directed ground application, additional methods should be employed for leaf spot control.
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing products/A/year. 4) Do not exceed 2 applications per year when applying at the highest rate (8 fl oz/A) or 6 applications per year when applying at the lowest rate (2.5 fl oz/A). When applying 4 fl oz/A do not exceed 4 applications per year. 5) Do not feed hay from treated fields to livestock if used high rate (8 fl oz/A). 6) Do not apply within 14 days of harvest (14-day PHI) with low use rate (4 fl oz/A). 7) Do not apply within 21 days of harvest (21-day PHI) if used high use rate (8 fl oz/A). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Pecans	Pecan Scab (<i>Cladosporium caryigenum</i>) Downy Spot (<i>Mycosphaerella caryigena</i>) Liver Spot (<i>Gnomonia caryae pv pecanae</i>) Vein Spot (<i>Gnomonia nerviseda</i>) Zonate Leaf Spot (<i>Cristulariella moricola</i>) Powdery Mildew (<i>Microsphaera penicillata</i>)	4-8 (0.11-0.22)	Pecan scab: Apply 4-8 fl oz/A on a 14 day schedule during bud break and pre-pollination sprays. Apply 6-8 fl oz/A during nut formation and cover sprays. Use higher rates when disease pressure is heavier. Other listed foliar diseases: Apply 4 fl oz/A with other registered pecan products labeled for these mid to late season foliar diseases. Observe all directions, precautions, and limitations for the other products.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or by aerial application (a minimum amount of 20 gal/A).</p>			
<p>The active ingredient(s) in this product may have effects on federally listed threatened and endangered species or critical habitat in some counties. When using this product, you must follow the measures contained in the County Bulletin for the county in which you are applying the pesticide. To determine whether your County has a Bulletin, consult http://www.epa.gov/espp/bulletins.htm. Bulletins also may be available from local pesticide dealers, extension offices, or State pesticide agencies.</p> <p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 32 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.9 lb ai propiconazole-containing products/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 8 applications per year when applying at the lowest rate (4 fl oz/A). 5) Do not apply after shuck split or within 45 days of harvest, whichever comes first. 6) Do not graze livestock in treated areas or cut treated cover crop for feed. 			

Crop	Target Diseases	Use Rate fl oz product/A	Application Instructions
Pineapple (Hawaii only)	Butt rot (<i>Ceratocystis paradoxa</i>)	0.75 fl oz/100 gal of water (1:17,000) (0.02 lb ai/100 gal of water)	Treatments can be made in either a cold or hot water dip. Cold Water Dip: Immerse crowns to give thorough wetting, remove, and allow to drain. Hot Water Dip: Maintain water temperature at 125°F (52°C). Soak crown for 20-30 minutes, remove, and allow to drain.
Specific Use Restrictions: <ol style="list-style-type: none"> 1) Do not use treated crowns for food or feed. 2) Do not graze while plant is growing. 3) Do not graze tops until fruit is harvested. 4) Dispose of used dip solution according to local, state, and federal regulations. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Pistachios	Botryosphaeria Panicle and Shoot Blight (<i>Botryosphaeria dothidea</i>)	5-8 (0.14-0.22)	Begin applications when green leaf tissue becomes visible and continue on a 14-21 days interval. Under severe disease conditions, use the higher rate and the shorter interval. NOTE: Under certain conditions Tilt applications may cause smaller and/or greener leaves. Yields of pistachios displaying these characteristics have not been reduced due to Tilt treatments.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 15 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 32 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.9 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 6 applications per year when applying at the lowest rate (5 fl oz/A). 5) Do not apply within 60 days of harvest (60-day PHI). 6) Do not graze livestock in treated areas or cut treated cover crop for feed. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Quinoa	Leaf Spot (<i>Ascochyta hyalospora</i>) Stalk Rot (<i>Phoma exigua</i>)	4 (0.11)	Apply prior to disease development. An adjuvant may be added at specified rates.
Note: Tilt can be applied by either ground, chemigation, or aerial application.			
Specific Use Restrictions: <ol style="list-style-type: none"> 1) Do not apply more than 8 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/year of Tilt if forage or hay will be harvested. 3) Do not apply more than 4 fl oz/A/application of Tilt. 4) Do not apply more than 0.22 lb ai propiconazole-containing products/A/year. 5) Do not exceed 2 applications per year. 6) Do not apply within 7 days of harvest for forage or hay (7-day PHI). 7) Do not apply within 30 days of harvest (30-day PHI). 			

Crop	Target Diseases	Use Rate fl oz Product/A	Application Instructions
Rapeseed Subgroup 20A Canola including cultivars, varieties, and/or hybrids of these and others in this group (see below)	Alternaria black spot <i>(Alternaria brassicae)</i> Black leg/Phoma <i>(Leptosphaeria maculans)</i> Cercospora leafspot <i>(C. brassicicola)</i> Head rot <i>(Rhizoctonia solani)</i> Powdery mildew <i>(Erysiphe polygoni)</i>	2.6–4 (0.07–0.11)	For Phoma control, apply during the rosette stage between 2nd true leaf and bolting. For Alternaria, make an application at the end of flowering/early pod set. For other foliar diseases, apply at first sign of disease. For head rot, apply at 50% flowering. <i>Optional language if label has a rate range: If disease pressure is high, use the highest rate.</i>
<p>Note: For best results, sufficient water volume must be used to provide thorough coverage. Tilt can be applied by ground, air, or chemigation. For chemigation, apply in 0.1-0.25 inches/A of water. Chemigation with excessive water may lead to a decrease in efficacy.</p>			
<p>Complete list of Rapeseed subgroup 20A: Borage, crambe, cuphea, echium, flax seed, gold of pleasure, hare's ear mustard, lesquerella, lunaria, meadowfoam, milkweed, mustard seed, oil radish, poppy seed, rapeseed, sesame, sweet rocket and cultivars and/or hybrids of these</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 4 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.113 lb ai of propiconazole-containing products/A/year. 4) Do not exceed 1 application per year. 5) Do not apply within 30 days of harvest (30-day PHI). 			

Crop	Target Diseases	Use Rate fl oz Product/A (lb ai/A)	Application Instructions
Rice	Sheath Blight (<i>Rhizoctonia solani</i>) Brown Leaf Spot (<i>Helminthosporium oryzae</i>) Narrow Brown Leaf Spot (<i>Cercospora oryzae</i>) Leaf Smut (<i>Entyloma oryzae</i>) Sheath Spot (<i>Rhizoctonia oryzae</i>) Kernel Smut (<i>Tilletia barclayana</i>) Aggregate Sheath Spot (<i>Rhizoctonia oryzae-sativa</i>) Black Sheath Rot (<i>Gaeumannomyces graminis</i>) For disease suppression of: False Smut (<i>Ustilaginoidea virens</i>) Stem Rot (<i>Sclerotium oryzae</i>)	6-10 (0.17-0.28)	Timing of Tilt application will depend on disease severity, disease complex and rice variety/growth stage. Consult local extension experts for local economic thresholds established for various rice varieties and diseases. Tilt should be applied on either of the following schedules as an aerial spray in 5-10 gal of water/A. A. 6 fl oz/A at first internode elongation (up to 2-inch panicle) and repeat at swollen boot. Make the second application 14 days after the first application, but before the boot splits and head emerges. Tilt provides best control of sheath blight when the first application is applied at disease appearance in the field. The first application is advised when 5% or fewer of the tillers are infected. B. 10 fl oz/A at first internode elongation (up to 2-inch panicle). The 10 fl oz/A rate is advised if greater than 10% of the tillers are infected with sheath blight. If disease reappears, use another registered fungicide for the second application. Tank mix option: Apply 6 fl oz/A of Tilt in a tank mix with azoxystrobin or other fungicides for control of rice diseases.
Wild Rice (MN only)	Helminthosporium Leaf Blight (<i>Helminthosporium sp.</i>) Brown Spot (<i>Bipolaris spp.</i>)	6-8 (0.17-0.22)	Apply 6 fl oz/A of Tilt at both booting and heading, or make a single application of 8 fl oz/A at booting. Minimum re-application interval is 10 days.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt must be applied by air.			
The active ingredient(s) in this product may have effects on federally listed threatened and endangered species or critical habitat in some counties. When using this product, you must follow the measures contained in the County Bulletin for the county in which you are applying the pesticide. To determine whether your County has a Bulletin, consult http://www.epa.gov/espp/bulletins.htm . Bulletins also may be available from local pesticide dealers, extension offices, or State pesticide agencies.			
Specific Use Restrictions: 1) Do not apply more than 12 fl oz/A/year of Tilt. 2) Do not apply more than 10 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing products/A/year. 4) Do not exceed 1 application per year when applying at the highest rate (10 fl oz/A) or 2 applications per year when applying at the lowest rate (6 fl oz/A). 5) Do not apply within 35 days of harvest (35-day PHI). 6) Do not release flood water within 7 days of an application. 7) Do not apply to stubble or ratoon crop rice. 8) Do not use in rice fields where commercial farming of crayfish will be practiced. 9) Do not drain water from treated rice fields into ponds used for commercial fish farming. 10) Do not use water drained from treated fields to irrigate other crops.			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Sorghum	Ergot (<i>Claviceps sorghi</i>)	3-4 (0.08-0.11)	Make the first application at or just prior to flowering. Repeat on a 5-7 day interval. Apply up to 4 times.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground (a minimum of 15 gal/A) or aerial application (a minimum of 10 gal/A).</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz of Tilt (0.22 lb ai propiconazole) on sorghum harvested for forage. 3) Do not apply more than 4 fl oz/A/application of Tilt. 4) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 5) Do not exceed 4 applications per year. 6) Do not apply within 30 days of harvest (30-day PHI) for forage. 7) Do not apply within 21 days of harvest (21-day PHI) for grain and stover. 8) Do not graze livestock or cut for green chop or silage within 30 days of application. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Soybeans	Aerial Web Blight (<i>Rhizoctonia solani</i>) Anthracnose (<i>Colletotrichum truncatum</i>) Brown Spot (<i>Septoria glycines</i>) Frogeye Leaf Spot (<i>Cercospora sojina</i>) Soybean Rust (<i>Phakopsora pachyrhizi</i>)	4-6 (0.11-0.17)	<p>Aerial Web Blight: Apply 5-6 fl oz/A at the first appearance of disease and repeat the application 14-21 days later. Under severe disease conditions use the higher rate and shorter interval.</p> <p>Other foliar diseases: Apply 6 fl oz/A at growth stage R3 (early pod set when pods are 1/8-1/4 inch long) and 14-21 days later at growth stage R5 (pod fill).</p> <p>Soybean rust: Apply 4-6 fl oz/A at first indication that disease is in the area. For best control, preventive applications work best. Repeat on 14-21 day interval. Use higher rate and shorter interval when disease is present in field and incidence is less than 2% (2 plants in 100 are infected). If incidence is greater than this or if disease is in mid canopy, control will not be acceptable. Scouting for the disease and/or being aware of the proximity of the disease via monitoring systems will aid in the proper timing to maximize the effectiveness of the fungicide applications.</p> <p>On certain varieties, Tilt applications may cause crinkled, smaller and/or greener leaves. Yields of dry beans displaying these characteristics have not been reduced due to Tilt treatments.</p>
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application. Addition of an oil-based additive is advised for improved coverage and penetration when applying by air.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 12 fl oz/A/year of Tilt. 2) Do not apply more than 6 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing product/A/year. 4) Do not exceed 2 applications per year when applying at the highest rate (6 fl oz/A) or 3 applications per year when applying at the lowest rate (4 fl oz/A). 5) Apply up to Stage R6. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Stone Fruits Crop Group 12-12 Apricots Cherries, Sweet Cherries, Tart Nectarines Peaches Plums Plumcot Prunes	Brown Rot Blossom Blight <i>(Monilinia spp.)</i>	4 (0.11)	Apply Tilt at early bloom stage. If disease pressure is low, a second application may be made as needed through petal fall. Under conditions of high disease pressure and/or very susceptible varieties, make a second application from 75-100% bloom and a third application at petal fall.
	Fruit Brown Rot <i>(Monilinia spp.)</i>	4	Apply as needed a maximum of 2 sprays during the preharvest period up to the day of harvest (0-day PHI). If high inoculum and severe disease conditions persist, apply another registered fungicide after the 2 Tilt applications.
	Powdery Mildew <i>(Podosphaera spp.)</i> Cherry Leaf Spot <i>(Blumeriella jaapii)</i> Rust <i>(Tranzschelia discolor)</i>	4	Follow the Brown Rot Blossom Blight schedule. Make up to 2 additional applications on a 10-14 day interval from the end of petal fall to harvest.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Stone fruit diseases are most effectively controlled by ground applications. Tilt may be applied by ground or air (a minimum of 15 gal/A).</p>			
<p>Complete List of Stone Fruit Crops: Apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these.</p>			
<p>Precaution: Applications of Tilt during bloom to Stanley plums have occasionally caused fruit to be less oval in shape and smaller in size at harvest. To avoid this, do not apply Tilt to Stanley plums earlier than 21 days prior to harvest.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 20 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.56 lb ai propiconazole-containing product/A/year. 4) Do not exceed 5 applications per year. 5) Tilt may be applied the day of harvest (0-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Strawberry and other Low Growing Berry Subgroup 13-07G (except Cranberry) See additional crops below.	Anthracnose <i>(Colletotrichum acutatum)</i> Leaf Spot <i>(Cercospora fragariae)</i> Powdery Mildew <i>(Sphaerotheca macularis)</i> Leaf Rust <i>(Phragmidium potentillae)</i>	4 (0.11)	Begin applications when disease levels are no more than 5%. Apply 4 fl oz/A of Tilt up to 4 times on a 7-day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action.
Additional Low Growing Berries: Bearberry, Bilberry, Cloudberry, Muntries, Partridgeberry			
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground (a minimum of 20 gal/A) or aerial application (a minimum of 15 gal/A).			
Specific Use Restrictions: 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year. 5) Tilt may be applied the day of harvest (0-day PHI).			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Sugar Beets	Leaf Spot (<i>Cercospora beticola</i>) Powdery Mildew (<i>Erysiphe polygoni</i>)	4 (0.11)	Begin applications at first sign of disease. Repeat on a 10-14 day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.			
Specific Use Restrictions: <ol style="list-style-type: none"> 1) Do not apply more than 12 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.34 lb ai propiconazole-containing product/A/year. 4) Do not exceed 3 applications per year. 5) Do not apply within 21 days of harvest (21-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Sugarcane	Pineapple disease (<i>Ceratocystic paradoxa</i>)	0.75 fl oz/ 100 gal of water (1:17,000) (0.02 lb ai/100 gal of water)	<p>Apply Tilt to cut seed pieces using one of following methods:</p> <p>Cold Water Dip: Immerse seed pieces to give thorough wetting, remove, and allow to drain.</p> <p>Hot Water Dip: Maintain water temperature at 125° F (52°C). Soak the seed pieces for 20-30 minutes, remove, and allow to drain.</p> <p>Conveyer Belt Treatment: Treat seed pieces with Tilt/water solution using in-line directed spray sufficient to wet cut ends.</p> <p>Dispose of used dip solution according to local, state, and federal regulations.</p>
	Brown Rust (<i>Puccinia melanocephala</i>) Orange Rust (<i>Puccinia kuehnii</i>)	4-6 (0.11-0.17)	<p>Apply Tilt as a foliar application prior to rust development and continue throughout the season every 14-28 days.</p> <p><i>Optional language if label has a rate range:</i> If disease pressure is high, use the highest rate.</p> <p><i>Optional language if label has a single rate and interval range:</i> If disease pressure is high, use the shortest interval.</p> <p><i>Optional language if label has a rate range and interval range:</i> If disease pressure is high, use the shortest interval and highest rate.</p> <p>Tilt may be applied by ground, air or chemigation.</p> <p>Dispose of used dip solution according to local, state, and federal regulations.</p>
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 24 fl oz/A/year of Tilt. 2) Do not apply more than 6 fl oz/A/application of Tilt. 3) Do not apply more than 0.67 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (6 fl oz/A) or 6 applications per year when applying at the lowest rate (4 fl oz/A). 5) Tilt may be applied within 30 days of harvest (30-day PHI). 6) Do not use treated seed pieces for food or feed. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Ti palm	Cercospora Leaf spot (<i>Cercospora</i> spp.) Phyllosticta leafspot	3-4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 7-10 day interval. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (4 fl oz/A) or 5 applications per year when applying at the lowest rate (3 fl oz/A). 5) Do not apply within 7 days of harvest (7-day PHI). 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
<p>Tree Nuts Crop Group 14-12</p> <p>See list below for tree nuts</p> <p>See specific directions for Almond Filbert Pecan Pistachios</p>	<p>Foliar Diseases</p>	<p>4-8 (0.11-0.22)</p>	<p>Apply Tilt at first sign of disease. Repeat on a 7-14 day interval.</p>
<p>Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by either ground or aerial application (a minimum of 15 gal/A). For best control of tree nut diseases, ground applications are advised.</p>			
<p>Complete List of Tree Nut Crops: African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Do not apply more than 32 fl oz/A/year of Tilt. 2) Do not apply more than 8 fl oz/A/application of Tilt. 3) Do not apply more than 0.9 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (8 fl oz/A) or 8 applications per year when applying at the lowest rate (4 fl oz/A). 5) Do not apply within 60 days of harvest (60-day PHI) except for pecans (see specific directions). 6) Do not graze livestock in treated areas or cut treated cover crop for feed. 			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Vegetable, root, except sugar beet, subgroup 1B Carrots	Leaf Blights (<i>Cercospora carotae</i>) (suppression of <i>Alternaria dauci</i>) Powdery Mildew (<i>Erysiphe polygoni</i>)	4 (0.11) Tilt plus chlorothalonil 2 (0.06)	Apply 4 fl oz of Tilt when conditions favor disease development. Continue applications on a 7-10 day interval, using the shorter interval when disease conditions are severe. If desired, a spreader-sticker may be used. Apply 2 fl oz of Tilt with 0.75 lb ai of chlorothalonil/A (1 pint Bravo WeatherStik). Begin applications when conditions favor disease development. Continue applications on a 7-10 day interval. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action
Radish, Radish, oriental Burdock, edible; celeriac; chervil, turnip-rooted; chicory; ginseng; horseradish; parsley, turnip-rooted; parsnip; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; turnip.	Cercospora Leaf spot (<i>Cercospora</i> spp.)	3-4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 7- 10 day interval. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
Garden Beets	Leaf Spot (<i>Cercospora beticola</i>) Powdery Mildew (<i>Erysiphe polygoni</i>)	3-4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 14-day interval. Make no more than 2 consecutive applications before rotating to another registered fungicide with a different mode of action. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
Application: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground (a minimum of 15 gal/A), aerial application (a minimum of 5 gal/A), or chemigation.			
Specific Use Restrictions: 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year when applying at the highest rate (4 fl oz/A) or 8 applications per year when applying at the lowest rate (2 fl oz/A). 5) Do not apply within 14 days of harvest (14-day PHI).			

Crop	Target Diseases	Use Rate fl oz product/A (lb ai/A)	Application Instructions
Watercress	Alternaria leafspot (<i>Alternaria</i> spp.) Cercospora leafspot (<i>C. nasturtii</i>)	3 - 4 (0.08-0.11)	Begin applications at first sign of disease. Repeat on a 7- 10 day interval. Make no more than 2 applications before harvesting leaves. Up to 4 applications can be made per year. If disease levels continue to increase, immediately switch to a fungicide with a different mode of action.
Note: Tilt is most effective when applied and allowed to dry before a rainfall. For best results, sufficient water volume should be used to provide thorough coverage. Tilt may be applied by ground, air, or chemigation.			
Specific Use Restrictions: 1) Do not apply more than 16 fl oz/A/year of Tilt. 2) Do not apply more than 4 fl oz/A/application of Tilt. 3) Do not apply more than 0.45 lb ai propiconazole-containing product/A/year. 4) Do not exceed 4 applications per year. 5) Do not apply within 3 days of harvest (3-day PHI).			

POST HARVEST USE

Crop	Target Diseases	Use Rate fl oz product/100 gal (lb ai)	Application Instructions
Pineapple	Ceratomyces Butt Rot (<i>C. paradoxa</i>)	3 - 4 fl oz (0.08-0.11)	Apply 3 to 4 fl oz in 100 gallons of water or wax water emulsion after harvest. Fruit should be dipped or sprayed for thorough coverage and allowed to drain. Limit dipping time to no more than 3 minutes. Dip solution should be replaced with fresh dip solution after 200,000 lb of fruit have been treated. Fruit discarded from fresh fruit packing operations may be used for processing. Cannery wastes may be fed.
Specific Use Restrictions: 1) Do not apply more than 4 fl oz/100 gal as a post-harvest treatment.			

Tilt Rate Conversion Table

Fl Oz of Tilt/Acre	Lb AI/Acre	Acres Treated Per 1 Gallon Tilt
2	0.056	64
4	0.1125	32
6	0.169	21.3
8	0.225	16
10	0.28	12.8
12	0.34	10.7
16	0.45	8
20	0.56	6.4
24	0.67	5.3
30	0.84	4.3
32	0.90	4

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Store in the original container in cool place.

Pesticide Disposal

Pesticide wastes may be toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Handling [less than 5 gallons]

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Container Handling [greater than 5 gallons]

Refillable container. Refill this container with pesticide only. Do not reuse the container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from container into application equipment or mix tank. Fill container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Container Handling [greater Than 5 gallons]

Non-refillable container. Do not reuse or refill this container. Triple rinse container

(or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

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For non-emergency (e.g., current product information) call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

Tilt 617 MAS 0618 AMEND-D DEC2017 – ep – 8-29-19
000100-00617.20171222D.TILT-AMEND-DEC2017

SUPPLEMENTAL LABELING

Syngenta Crop Protection, LLC
P. O. Box 18300
Greensboro, North Carolina 27419-8300
SCP

PROPICONAZOLE	GROUP	3	FUNGICIDE
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Tilt®

Fungicide

This supplemental label expires on 09/31/2022 and must not be used or distributed after this date.

Active Ingredient:

Propiconazole*: 41.8%

*Other Ingredients**:* 58.2%

Total: 100.0%

*CAS No. 60207-90-1

**Contains petroleum distillates

Tilt is formulated as an emulsifiable concentrate (EC) and contains 3.6 lb of propiconazole per gallon.

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

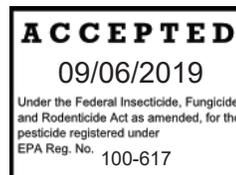
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See additional precautionary statements and directions for use inside booklet.
See First Aid statement inside booklet or on container label.

EPA Reg. No. 100-617

All applicable directions, restrictions and precautions on the EPA-registered label are to be followed. Before using Tilt as permitted according to this Supplemental Labeling, read and follow all applicable directions, restrictions, and precautions on the EPA-registered label on or attached to the pesticide product container. This Supplemental Labeling contains revised use instructions and/or restrictions that may be different from those that appear on the container label. This Supplemental Labeling must be in the possession of the user at the time of pesticide application. It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

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DIRECTIONS FOR USE

Crop	Target Diseases	Use Rate	Application Instructions
Avocado	Laurel Wilt (<i>Raffaella lauricola</i>)	0.25 fl oz Tilt per inch tree diameter (Equivalent to 3.2 grams of propiconazole per inch of tree diameter).	<p>Tree Measurement: Measure the diameter of 5 to 10 representative trees in a commercial orchard with a tree diameter-tape (D-tape) at 1-2 feet above the ground. This is the diameter at a 1-2 feet trunk height (tree diameter = TD). If only a regular tape is available, measure the tree circumference and divide that number by 3.14. Calculate the average TD of the trees in the orchard. If trees are multi-trunked, take the diameters near where the multi-trunks meet. If branching occurs at ground level then measure the diameter of the trunks (treatment rate would be based on the combined trunk diameters).</p> <p>Retreatment: When trees are first treated with Tilt, note whether Laurel Wilt is present and, if so, the severity of symptoms. It is expected that a single application per year will be sufficient. However, trees can be treated after a minimum re-treatment interval of 90 days and a maximum of 126 fl oz of Tilt/A/year. Retreatment should be considered if laurel wilt develops in trees within one year of treatment. Thereafter, preventative retreatment should be conducted annually, even in the absence of the disease.</p> <p>Treat the avocado trees in commercial orchards when sap is actively moving up in the trees, not during dormant periods (e.g. cold air and soil temperatures during winter or when the trees are leafless). Preventative applications are more effective than therapeutic treatments. Trees that are severely affected by laurel wilt may not respond well to treatment. Make sure that the water used does not contain any other chemicals and the fungicide mixing container is clean.</p> <p><u>Calculate the total fl oz of Tilt per acre:</u> $0.25 \text{ fluid ounce} / 1 \text{ inch TD} \times (\text{average TD of trees}) \times \text{number of trees/acre} = \text{total fluid ounces of Tilt/A.}$</p>
<p>Application: Choose one of the two application methods: tree injection or tree infusion. It is important for Tilt to get into the xylem of the tree to be efficacious. See directions for each method that follows.</p>			
<p>Specific Use Restrictions:</p> <ol style="list-style-type: none"> 1) Use is limited to California, Florida and Puerto Rico only. 2) Do not apply more than 252 fl oz of Tilt/A/year. 3) Do not apply more than 126 fl oz/A/application of Tilt. 4) Do not apply more than 7.09 lb ai propiconazole-containing product/A/year. 5) Do not apply more than 2 applications per year. 6) The minimum retreatment interval is 90 days. 7) Do not apply within 7 days of harvest (7-day PHI). 			

Avocado Tree Injection or Tree Infusion Application Method:

Use the rates in **Table 1**. Use the injection method to inject the product into the tree trunk or the infusion method to infuse the product into the flare roots or trunk base. Drill holes according to the method below 3-6 inches apart completely around the tree. Use up to the volume specified in **Table 1**. It is advised to have an arborist trained in injection/infusion to treat the trees or provide training.

Correct Location for Injector or Infusion Placement:

The flare root area is the transitional zone between the trunk and the root system. Uptake and distribution of Tilt is more effective when infusions are made into the flare roots. In addition, wounds created in the flare root area close more rapidly in comparison to wounds above the flare root area. Applications made via injections should be made to the trunk and/or major limbs.

Tree Preparation:

1. Depending on the application type (injection or infusion) prepare the area to be treated. Infusion applications should be made to the flare roots. Injection applications should be made to the trunk.
2. Heavy, thick or loose outer bark may be carefully shaved to form a smoother injection point and to ensure the operator that the drill hole penetrates through the bark to the xylem.
3. For infusions, if the flare roots are not clearly exposed, carefully remove 2 to 4 inches of soil from the base of the tree to uncover the top of the flare roots. Brush away loose soil.
4. Drill holes through the bark, into sapwood using a clean sharp drill bit. Drill hole diameter should be adequate to allow insertion of injection tees and formation of air tight contact between active xylem and the delivery point of the injection tees. Generally, a drill hole diameter of 7/32-5/16 inch is appropriate. Follow manufacturer's instructions for the particular injection device used in the treatment.
 Drill hole depth should be adequate to deliver the product into active xylem tissue. Generally, 3/4 inch depth is appropriate, but trees with thick bark may require increased drill hole depth to reach the active xylem layer. Space injectors 3-6 inches apart around the base of the tree. There should be several injection/infusion points around each tree. New infusion sites should be used for each application. Do not drill in the valleys between the flare roots or into cankered areas. Drill above these areas into the trunk, then continue again into sound sapwood on the flares.
5. Disinfect the drill bit between trees with household bleach (20% solution), ethanol, or other disinfectant. Rinse bit with clean water after disinfecting.
6. Insert into the drilled holes the injection ports ("tees"). For infusions, connect plastic tubing to "tees". The tubing should have inlet and outlet valves.
7. Mix the specified amount of Tilt and water thoroughly in the tank before beginning the infusion treatment. For the injection treatment, use a syringe to inject the specified amount of Tilt and water into the injection port.

Table 1. Amount of Tilt to use according to tree size
 Dilute 0.25 fl oz of Tilt in up to 1 liter of water per inch TD

TD inches	Amount Tilt		Water Volume for injection	
	ml	fl oz	liters	gallons
1	7	0.25	1	0.25
3	20	0.75	3	0.8
5	35	1.25	5	1.3
10	70	2.5	10	2.6
15	100	3.75	15	4.0
20	145	5	20	5.25

Infusion:

For pressurized infusions, with the outlet valve open, connect the tank to the inlet valve and begin pumping solution until all air bubbles come out of the outlet valve. Direct the solution into a container and return the solution to the tank. Shut off the outlet valve. Pressurize tank to 20-30 psi. Check for leaks and gently tap in tees if necessary. Maintain continuous pressure on the injection system until the full amount of solution is in the tree.

Passive infusions, using gravity flow are also acceptable.

Injection:

For injections, use a veterinary syringe to inject the specified amount of Tilt and water into each injection port in the trunk of the tree and/or major limbs.

After infusion or injection is complete, remove tees and leave drill holes unplugged. A water flush to cleanse the hole will assist with wound closure. For infusion applications, soil should be replaced around the tree. It is not necessary to treat the drill holes with wound paint or other sealing compounds. New injection sites should be used for each application.

Contact your local extension agent for more details on tree injection and infusion. The injection and infusion systems described is mean as an example; please refer to manufacturer's instructions when using other types of tree injection and infusion systems.

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